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09/741,071	12/21/2000	Kazuo Ishii	Q62336	7426

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EXAMINER

BROOKE, MICHAEL S

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 06/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/741,071

Applicant(s)

ISHII ET AL.

Examiner

Michael S. Brooke

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 2,4,5,7,8 and 11-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,6,9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 19
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. The information disclosure statement (IDS) submitted on 02/04/03 was filed after the mailing date of the first action on the merits on 12/18/02. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Election/Restrictions

2. Claims 2, 4, 5, 7, 8 and 11-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8.

3. Applicant's election without traverse of species 2 in Paper No. 8 is acknowledged.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1 and 6 rejected under 35 U.S.C. 103(a) as being unpatentable over Kurotori (JP 03169644 abstract) in view of Saito et al. (4,752,784) and Saito (4,540,996).

Kurotori teaches an ink jet printer comprising a print head (1) which discharges an oily ink, containing a resin and a coloring component, directly onto a recording paper (P). The image is fixed on the recording paper by a heating roller (4). The steps of fixing the image, forming the image using an oily ink are deemed to be rendered inherent in view of the functions of the apparatus of Kurotori. That is, when Kurotori performs its intended function, it would necessarily perform the above recited method steps.

Kurotori teaches the claimed invention with the exception of an ink jet system ejecting ink with an electrostatic field and sequentially using two or more inks.

Saito et al. ('784) teaches an ink jet recording method, wherein an ink jet head uses a combination of thermal energy and an electrostatic field to eject ink. This method of ejecting ink provides the advantages of increased durability, improved jetting accuracy, improved color imaging and improved recording speed (col. 2:4-27).

It would have been obvious to one of ordinary skill in the ink jet art at the time the invention was made to have provided Kurotori with an electrostatic ejection system, as taught by Saito et al., in order to provide the advantages of increased durability, improved jetting accuracy, improved color imaging and improved recording speed.

Saito ('996) teaches an ink jet print head which sequentially deposits drops of different color inks onto a recording medium, in order to form a color image (col. 5:62-

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66). The step of sequential printing is deemed to be rendered inherent in view of the functions of the apparatus of Saito. That is, when Saito perform its intended function, it would necessarily perform the above recited method step.

It would have been obvious to one of ordinary skill in the ink jet art at the time the invention was made to have provided Kurotori an ink jetting unit which sequentially ejects different color inks, in order to form a color image, as taught by Saito.

6. Claims 3, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurotori (JP 03169644 abstract) in view of Saito et al. (4,752,784) and Saito (4,540,996), as applied to claims 1 and 6 above, and further in view of Carley (4,314,263).

Kurotori, as modified, teaches the claimed invention with the exception of at least one of a malfunction detecting member and a malfunctioning cause eliminating member, temporarily stopping image formation or operating the malfunction cause eliminating member and the malfunction cause eliminating member being a unit which detects adhesion of foreign matter on the head.

Carley teaches (col. 5:56-68 and col. 6:1-3) a fluid jet printing apparatus having a cleaning unit (34) which prevents the nozzle tip (32) from being fouled by foreign matter. The cleaning means has a continuously operating means for detecting foreign matter at the tip, and for automatically activating the cleaning means when fluid flow is impaired. The cleaning may be performed by various methods, such as heat, a chemical solvent, or mechanical wiping.

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It would have been obvious to one of ordinary skill in the ink jet art to have provided in Kurotori, as modified, a nozzle cleaning unit, as taught by Carley, for the purpose of preventing the nozzle from being fouled.

Response to Arguments

7. Applicant's arguments filed 05/19/03 have been fully considered but they are not persuasive.

In response to applicant's argument that Kurotori and Saito '784 are not combinable, because Saito does not use a fixing step, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, Saito is used to teach the advantage of using a combined ink jet/electrostatic ejection system, not to teach fixing the ink onto the substrate. Saito teaches that using an ink jet/electrostatic printing system provides the advantages of increased durability, improved jetting accuracy, improved color imaging and improved recording speed. One of ordinary skill in the art would have recognized that using a combined ink jet/electrostatic system would have provided these benefits in Kurotori.

Applicant's argument that Kurotori does not teach discharging an ink containing a resin and a coloring component directly onto the recording paper, is not persuasive.

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The abstract of Kurotori states that *"if a thermally crosslinking resin is employed for the component of the ink, not only the coupling force among the ink, but the coupling force of the ink to the paper are increased since the heat is added at the fixing time."* Thus, Kurotori does teach an oil ink containing a coloring component and a resin.

Applicant further argues that Kurotori does not teach an insoluble resin that is melted by the application of heat. While this may be true, this feature is not recited in either of the independent claims.

Applicant's argument that the ink jet system of Saito is distinct from the ink jet system of the present invention, is not persuasive. The Examiner acknowledges that the ejecting system of the present invention differs from that of Saito. However, the Applicant has not claimed any such difference. The independent claims recite *that "the image formation is carried out by an inkjet system of ejecting oily ink by an electrostatic field."* Saito teaches an ink jet system that uses an electrostatic field, thus, Saito meets the claimed limitation.

The Examiner acknowledges the Applicant's request for a translation of Kurotori. The Examiner has sent this document for translation and it should be ready in several weeks. When the translation arrives, the Examiner will submit it to the applicant. However, the Examiner wishes to point out that the rejection is based upon the abstract of Kurotori and at present, the information contained in the abstract is sufficient to reject the claims.

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Conclusion

8. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael S. Brooke whose telephone number is 703-305-0262. The examiner can normally be reached on M-F 5:30-2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russell E. Adams can be reached on 308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3431 for After Final communications.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4900.

Michael S. Brooke
Examiner
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MSB

June 1, 2003


JUDY NGUYEN
PRIMARY EXAMINER